



Forest Insect & Disease / Management

An Aerial Survey of
Forest Tent Caterpillar Defoliation
in Northern Wisconsin, 1981

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Introduction

Forest tent caterpillar, Malacosoma disstria Hübner, populations in Northwestern Wisconsin have been increasing for the last five years. Signs of increase associated with the current outbreak were first detected in 1977 just east of Lake Nebagamon in Douglas County. Because of the widespread heavy defoliation, a cooperative aerial sketchmapping survey was conducted on June 30, 1981 with the Wisconsin Department of Natural Resources.

Methods

An aerial reconnaissance of the Northwestern Wisconsin Counties infested by forest tent caterpillars was conducted to determine the distribution of moderate to heavy defoliation and to obtain an estimate of acres affected in each county. Light defoliation, difficult to discern from air, was not mapped.

Survey information was plotted on county maps (scale = about 3/16" to the mile) provided by the Wisconsin Department of Natural Resources. Mapping was done from a Cessna 182 flown at approximately 90 mph at 1500 feet above the ground. Data was recorded along irregular east-west transects to establish the general perimeter of the infested zone and to record areas of visible defoliation within it. Defoliation was mapped in Ashland, Bayfield, Douglas, Iron, Sawyer and Washburn counties.

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Results

Acres of moderate to heavy defoliation are summarized by counties in Table 1.

Table 1.--Acres moderately to heavily defoliated by the forest tent caterpillar in Wisconsin, 1981.

County	Acres Defoliated
Ashland	202,632
Bayfield	683,776
Douglas	475,687
Iron	62,941
Sawyer	7,474
Washburn	<u>5,760</u>
Total	1,438,270

Figure 1 depicts the general areas where defoliation was visible from the air.

Discussion and Recommendations

The forest tent caterpillar periodically defoliates extensive areas of aspen and mixed hardwood stands in the Lake States as populations increase and decrease at irregular intervals. Consecutive heavy defoliations may cause some twig dieback and growth loss. Intensity of monitoring annual changes in populations should be geared to anticipated need for control. Ordinarily, control with pesticides is not recommended except in specific situations (e.g. campgrounds, recreation areas, resorts) where the need for treatment would be warranted.

Figure 1.--Moderate and heavy forest tent caterpillar defoliation in Wisconsin, 1981.

